

The Broad-toothed Rat (*Mastacomys fuscus*) in Dandenong Ranges National Park — a Colony Located in Regenerating Forest

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The Broad-toothed Rat (*Mastacomys fuscus*) is a native rodent with a disjunct distribution in south-eastern Australia (Watts and Aslin 1980). The species has been classified as rare in Victoria (Baker-Gabb 1990). A small colony was located in Sherbrooke Forest in 1970 and the species' presence in Sherbrooke has been monitored since using predator scat analysis (Wallis *et al.* 1982). *M. fuscus* has been detected in fox scats collected between 1973 and 1985 with frequencies of occurrence ranging from 4% to 1% of scats (Wallis and Brunner 1987).

A technique to locate *M. fuscus* has been developed which does not rely on trapping (Wallis 1988). The technique involves searching in suitable grassy sites (often along tracks) and in dense wire grass under *Eucalyptus regnans* for runways with the obvious green scats of *M. fuscus*. The scats of the other native rodent which is common in the Park, *Rattus fuscipes*, appear often in the same runways, but are somewhat narrower, longer and much darker in colour. Microscopic analysis of grooming hairs in the *M. fuscus* scats is used to confirm the presence of *M. fuscus*. In contrast, the location by trapping may require a series of special techniques involving pre-feeding with appropriate bait and the removal of other small mammals from the trap site, as described in Brunner *et al.* 1977.

Recently a colony of *M. fuscus* was found in the Sherbrooke Forest region of Dandenong Ranges National Park. The colony lives in an area which was formerly an old pine plantation (*Pinus radiata*). It was clearfelled in stages between late 1985 and early 1987. The site is at the south-western edge of the old plantation and was the last section to be cleared. Regrowth in

the area is now four years old, and contains *E. regnans* (up to 3 m high) and a dense shrub layer of *Cassinia aculeata*, *Acacia dealbata*, *Coprosma quadrifida*, *Bedfordia arborescens*, *Pimelea axifolia* and other species typical of the tall open forest in Sherbrooke, as well as a ground cover of Wire Grass (*Tetrarrhena juncea*) and other grasses and mosses. The site was found to contain many runways with large quantities of the green scats considered characteristic of *M. fuscus* (Wallis 1988).

To confirm the presence of *M. fuscus* wire cage traps (33 x 20 x 16 cm) covered with plastic for protection and baited with peanut butter, honey and rolled oatmeal were set over four consecutive nights. One *M. fuscus* was trapped on night three. Its identification was confirmed by the presence of some green scats in the cage trap, and a tuft of hair was removed from the specimen's back and microscopically examined back in the laboratory. The scales at the base of the larger guard hairs had typically pointed ends — a feature which distinguishes *M. fuscus* from *R. fuscipes* (Brunner and Coman 1974). From the 78 traps set in total, 11 *Antechinus stuartii*, five *R. fuscipes* and one *M. fuscus* were captured. The Broad-toothed Rat is considered a very difficult mammal to trap when it exists in low densities (Wallis *et al.* 1982); interestingly, it was not necessary in this case to use pre-feeding or remove other species in order to trap *M. fuscus*.

There is some evidence that foxes and cats prey selectively on *M. fuscus* in preference to other rodents such as *R. fuscipes* (Green and Osborne 1981; Brunner pers. comm.). Thus the current fox control program within the Park and attempts at cat confinement by Sherbrooke Shire Council could well be important factors in the future survival of the *M. fuscus* colony.

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The next stage in this project is to search for other colonies of *M. fuscus* in the Dandenong Ranges National Park. Whilst the species is likely to occur in very low densities in the mature forest where dense wire grass and thick understorey exists under a *E. regnans* upper canopy (Wallis *et al.* 1982), it is possible that colonies of higher densities might live in more open sites with soft grasses, such as the site described in this paper.

I would like to thank Hans Brunner whose great knowledge and experience led to his identifying the site initially, and Linda Moon, Simone Louwhoff and Sarah Meachem for help with the trapping. Trapping was carried out under National Parks and Wildlife Permits 90-080 and 901/002 and with the approval of the Victoria College Animal Experimentation Ethics Committee. John Lloyd is particularly thanked for his support throughout this study and in our many years of research at Sherbrooke previously. The two anonymous referees are also thanked for their helpful suggestions about the manuscript.

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Monkey Vine or Gargaloo - *Parsonsia eucalyptophylla* F. Muell. A New Species for Victoria

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Whilst holidaying on the Snowy River near Wallis on the Victorian/New South Wales border a field botany trip was undertaken. The area visited was situated within the Cobberas/Tingaringy National Park south of Sandy Creek, 6 kilometres from Wallis. Some 100 metres up on the rocky slope from the Snowy River a creeper was noted. This was a species I had not encountered before.

Specimens were collected and forwarded to Mr. D. Albrecht of the Melbourne Herbarium. These specimens were identified as *Parsonsia eucalyptophylla*, a new taxa for Victoria.

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Parsonsia eucalyptophylla occurs in the western plains, western slopes and far western plains botanical divisions of New South Wales where it is found in sandy to loamy, or, red sandy soils. These shallow soils support Cypress Pine, Box and Mallee woodlands (Cunningham *et al.* 1981).

The habitat of the Victorian population occurs in shallow sandy rocky soil within the rain shadow area of the upper Victorian reaches of the Snowy River. Cypress Pine (*Callitris glaucophylla* and *C. enderlicheri*) and White Box (*Eucalyptus albens*) woodland.

On a subsequent visit to this site a more comprehensive examination of the area was undertaken. Approximately 27 mature